⇒ Sub Goal:

1. We can Increase customer satisfaction rate by giving them less jobs or removing employees in which they don't work well.

Customers request a job and for some reason they give a low satisfaction rate and request again for the same kind of job. So we can check there and find a solution for why they are requesting the same kind of jobs multiple times.

For a solution, based on customer satisfaction rate on a particular job we can find these job details and employee details of those who worked on that date. If more employees are getting the low customer satisfaction rates then we can give them less jobs or remove employees who have **higher hourly wages**.

2. We can Increase company revenue by evaluating our profit. Profit = (Invoice amount - (Material cost + employees hourly wages*time)). Profit depends on **invoice_amount, material_costs, employees hourly wages and how long the employee took to finish the job.**And we also check which job type gives us more profit so we can boost up that job type to increase our company revenue.

Functionality of the two initial visualizations

Visualization 1. Initial visualization is on customer feedback, I explore data on some date range with particular type of job and customer satisfaction rates. In a visualization that shows how much customers are satisfied with our work.

My first visualization is Average of Customer satisfaction rates and it shows how much satisfaction rates we got from customers. If one customer requests the same kind of job multiple times then it gives good and bad feedback so I calculate the average of rates for comprehensibility.

It will be helpful for our main goal to assign jobs to those employees who are working well to improve satisfaction rates.

and (Higher Customer satisfaction rates graph is just for comparison purposes.)
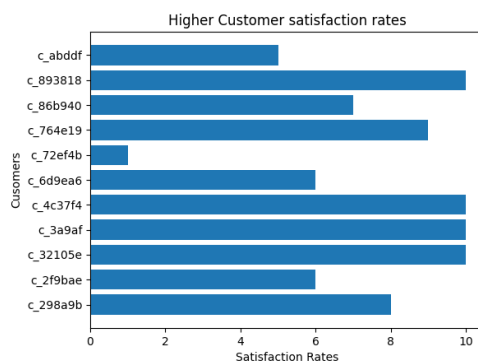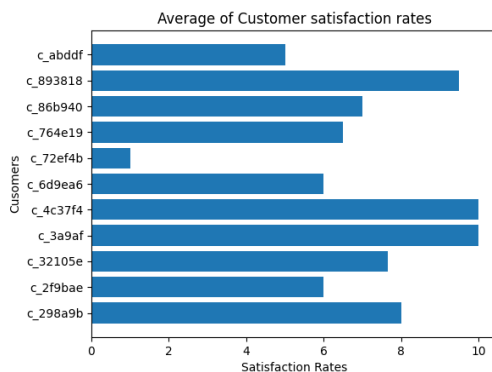
I worked on data with some filters and I presented these two results (**average customer satisfaction rates** and **Higher customer satisfaction rates**) for the same kind of jobs during the same time period.

Visualization 2.

For a second visualization, we can evaluate profit for our company revenue using material cost and Invoice with each Job Type. For a cost evaluation it was a bit difficult to plot with each individual record because some jobs have a really high amount of cost and some of them have a really small amount of cost.

So I plot a record with total invoice amount and material cost of each job type so we can evaluate our profit. And we can boost up that job type to get more profit in company revenue. It will be beneficial in enhancing jobs for our main goal to increase company revenue.
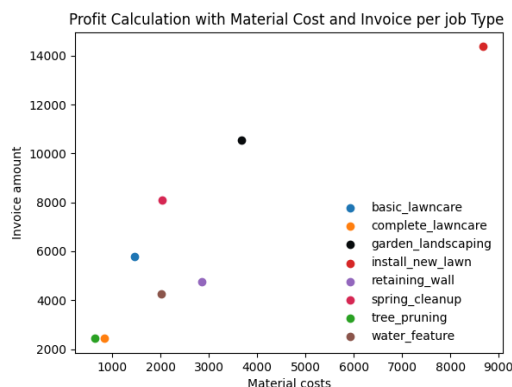
⇒ **My planned next step:** Broader exploration in lower rated jobs and finding which employees are not working well then put filters on data to give them less jobs or remove them from employee lists (if they have higher hourly wages in comparison to another employee who are working good.). ⇒ Broader analysis on each job type to find which jobs will give us more profit and work on to boost up that job.

⇒**Deeper exploration :** Broder study on particular job types with invoice amount, material costs, employees hourly wages, work finishing time and customer feedback for more profit and find out If customers give us a higher amount of good satisfaction rates on a particular kind of job then we can encourage that job type as well.

⇒**refinements to current visualizations :**

I need to explore more data based on which employee did that job (good or bad customer satisfaction rates) on a particular date.

There are multiple employees doing the same kind of jobs, multiple times and it's a bit complex to find those who got what kind of customer satisfaction rate. so, we need to Filter by date and need to inter-join between 'landscaping.csv' and 'calendar.csv' files to find out who did that job on that day and to calculate profit with using hourly wages of each employee we need to inter-join 'landscaping.csv' and 'employees.csv files'.